

In the drawings:

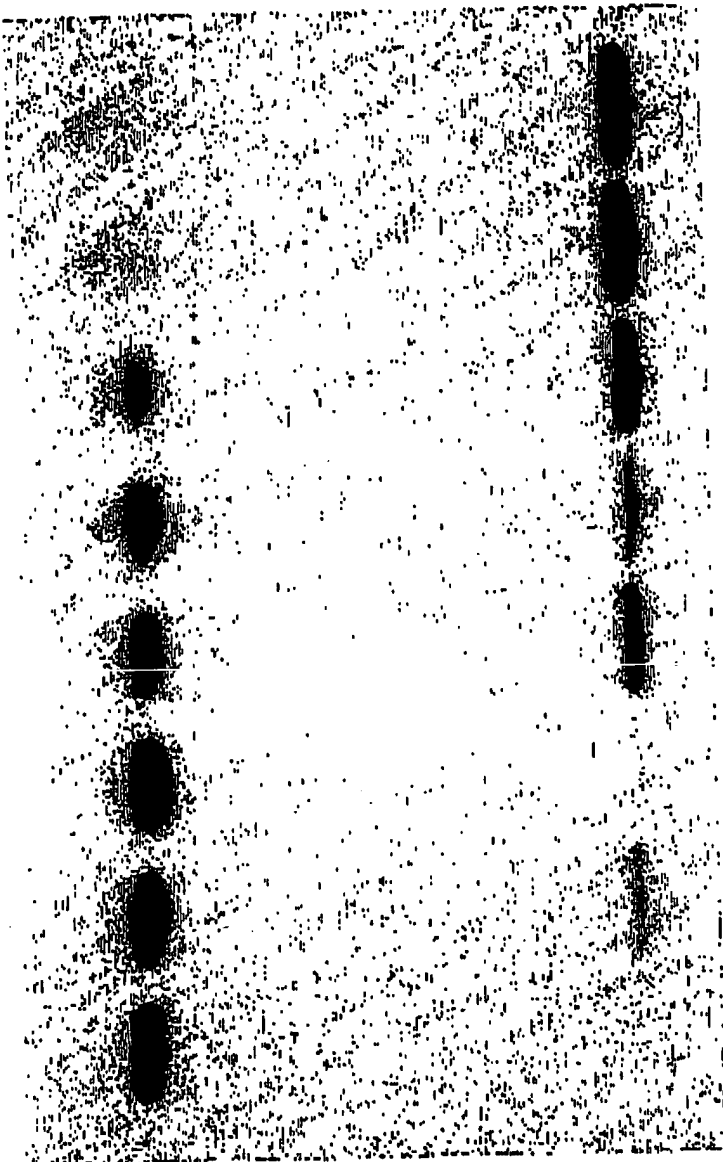
The attached sheet of drawings includes changes to Figure 1. This sheet replaces the original sheet of Figure 1.



# Time Course of *E. coli* versus *N. gonorrhoeae* RNase P Activity

0 20 60 120

E N E N E N E N



Precursor

5' Leader

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# Recombinant *Neisseria gonorrhoeae* RNase P Time Course of Activity

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No enz



85 nuc

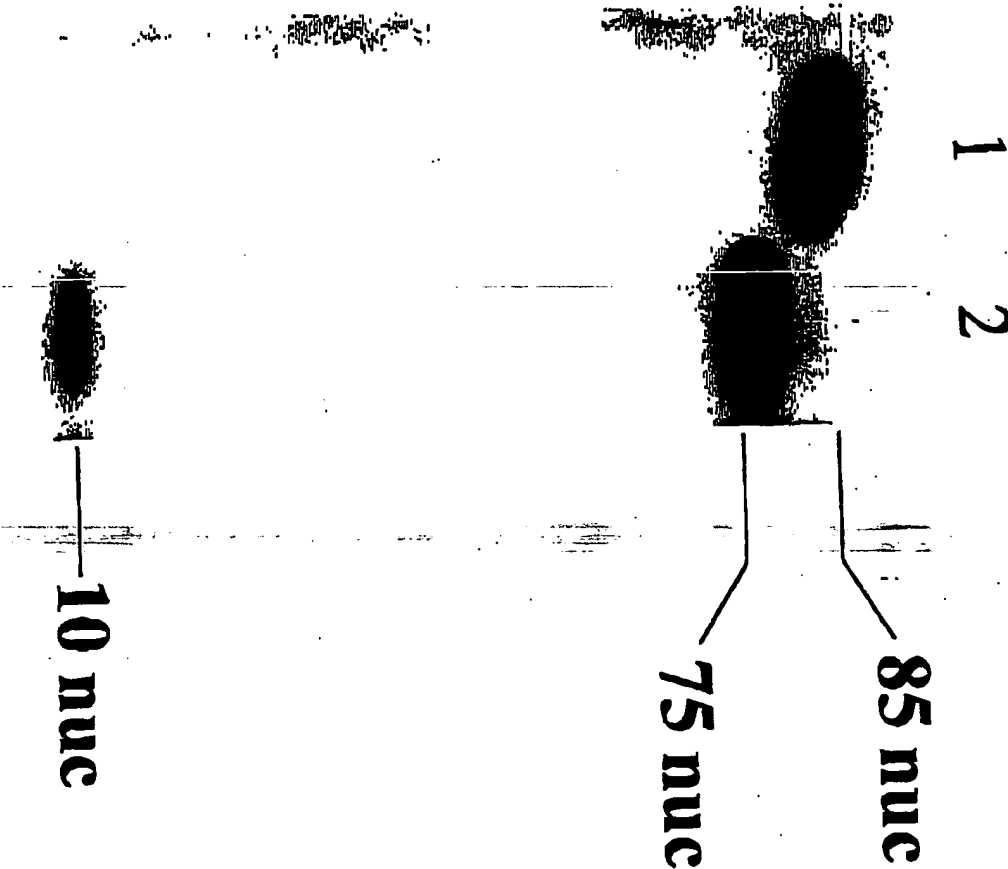
75 nuc

10 nuc

1 2 3 4 5 6 7



# Recombinant *Porphyromonas gingivalis* RNase P Enzyme Activity



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FIG. 1 Continued

SEQ ID NO.	Residue Number*	62	63	64	65	66	67	68	69	70	71	- 80 -	84	85	- 86	87	101	102	103	104	- - - -	105	
<b>Gram Negative Bacteria</b>																							
gamma purple																							
39	<i>Escherichia coli</i> (119)		R	I				L	T	E				F		V		S	E	A			
40	<i>Proteus mirabilis</i> (119)		R	I				L	A	E				F		V		T	E	V			
41	<i>Haemophilus influenzae</i> (136)		R	I				L	V	E				F		F		F	A	Q	I		
42	<i>Pseudomonas putida</i> (133)		R	L				L	M	D				I		I		H	Q	H			
43	<i>Buchnera aphidicola</i> (114)		K	I				L	I	E				F		V		V	N	I			
44	<i>Salmonella typhi</i> (119)	X	R	I				L	T	E				F		V		S	E	A			
45	<i>Yersinia pestis</i> (119)		R	I				L	T	E				F		V		T	E	A			
46	<i>Klebsiella pneumoniae</i> *		R	I				L	T	E				F		V		S	E	A			
47	<i>Salmonella paratyphi</i> *		R	I				L	T	E				F		V		S	E	A			
48	<i>Vibrio cholerae</i> *		R	F				I	C	E				F		V		F	N	L			
49	<i>Pseudomonas aeruginosa</i> *		R	L				L	I	E				I		V		H	Q	Q			
50	<i>Shewanella putrefaciens</i> *		R	I				V	I	D				I		V		N	K	L			
alpha purple																							
51	<i>Coxiella burnetii</i> (121)		R	V				V	V	E				I		V		Y	E	C			
52	<i>Rickettsia prowazekii</i> (121)		K	I				R	I	H		S	N	A		I		Q	Y	E			
53	<i>Caulobacter crescentus</i> *		R	A				R	L	E		P	H		Y		F		L	D	D	V	K
epsilon purple																							
54	<i>Helicobacter pylori</i> 26695 (161)		L	I				R	L	S		C	Q	A	L		F		E	K	H	F	L
55	<i>Helicobacter pylori</i> J99 (161)		L	I				R	L	S		C	Q	A	L		F		E	K	H	F	L
56	<i>Campylobacter jejuni</i> *		R	S				I	L	A		Q		K	Y		F		E	K	N	L	K
beta purple																							
57	<i>Neisseria gonorrhoeae</i> *		Y	M				V	I	R	D			F		V		R	A	E			
58	<i>Neisseria meningitidis</i> *		Y	M				V	I	R	D			F		V		R	A	E			
59	<i>Bordetella pertussis</i> *		T	L				V	I	E				Y		V		K	R	S	A	R	
60	<i>Thiobacillus ferrooxidans</i> *		R	I				R	L	E		T		V		V		G	A	Y			
<b>Gram Positive Bacteria</b>																							
high G & C																							
61	<i>Streptomyces bikiniensis</i> (123)		Q	V				R	L	H		L	P	L	V		V		A	R	D		
62	<i>Streptomyces coelicolor</i> (123)		K	V				R	L	H		L	P	L	V		V		A	R	D		
63	<i>Micrococcus luteus</i> (132)		R	V				R	L	S	A	L	P	V	L	V		Q	V		R	R	
64	<i>Mycobacterium tuberculosis</i> (125)	H	R	V	A			R	L	H		H	D	H	V		V		E	Q	Q		
65	<i>Mycobacterium leprae</i> (120)	H	R	V	A			R	L	H		H	D	H	V		V		E	Q	Q		
66	<i>Mycobacterium bovis</i> (115)	H	R	V	A			R	L	H		H	D	H	V		V		E	Q	Q		
67	<i>Mycobacterium avium</i> *	H	R	V	A			R	L	H		H	D	H	V		V		E	Q	Q		
68	<i>Corynebacterium diphtheriae</i> *	H	R	V	S			Q	L	H		H	D	H	V		V		E	R	A	D	
low G & C																							
73	<i>Bacillus subtilis</i> (119)		R	I				L	I	Q		K		Y		I		T	K	K	S		
74	<i>Bacillus halodurans</i> (118)		R	V				L	I	Q		S		Y		I		K	G	S			
75	<i>Bacillus anthracis</i> *		R	I	K			M	I	Q		D		F		V		K	K	S			
76	<i>Mycoplasma capricolum</i> (102)		K	V				Q	I	R	M	I		I		I		S	K	L			
77	<i>Mycoplasma pneumoniae</i> (118)		L	I				Q	V	K	A	N		V		V		K	Q	T	I		
78	<i>Mycoplasma genitalium</i> (128)		L	I				Q	I	K	S	E		I		V		K	Q	K	L		
79	<i>Streptococcus pyogenes</i> *		A	V				K	I	P	H	K		F		V		Q	Q	N			
80	<i>Streptococcus mutans</i> *		A	V				K	I	P	H	L	G		F		V		K	K	N		
81	<i>Streptococcus pneumoniae</i> *		Q	I				R	I	R	H	V		F		V		E	K	N			
82	<i>Staphylococcus aureus</i> NCTC*		K	I				A	I	E		L		I		V		Q	N	S			
83	<i>Staphylococcus aureus</i> COL*		K	I				A	I	E		L		I		V		Q	N	S			
84	<i>Clostridium difficile</i> *		R	V				L	I	E		K		I		V		K	N				
<b>Cyanobacteria</b>																							
85	<i>Synechocystis PCC6803</i> (124)		R	L				Q	I	R	A	K		V		V		L	R	E			
86	<i>Pseudanabaena PCC6903</i> (116)		R	F				Q	L	R	A	K		Q		I		G	D	D			
<b>Spirochaeta</b>																							
87	<i>Borrelia burgdorferi</i> (119)		R	I				L	F	E		E		I		F		E	S	L			
88	<i>Treponema pallidum</i> (133)		R	A				L	S	E		I		V		L		L	C	V			
<b>Chlamydiae</b>																							
89	<i>Chlamydia trachomatis</i> (120)		R	F				I	V	E		L		Q	V		V		S	E	E	L	
90	<i>Chlamydia trachomatis</i> MoPn*		R	F				I	V	E		L		Q	V		V		S	A	D	L	
91	<i>Chlamydia pneumoniae</i> (139)		S	F				V	V	E		L		Q	I		V		L	Q	D	F	
<b>Thermotoga</b>																							
69	<i>Thermotoga maritima</i> (117)		K	L				W	V	E		I		I		V		R	E	K			
<b>Bacteroides</b>																							
70	<i>Porphyromonas gingivalis</i> *		R	V				L	V	E		L				V		L		P	D	F	
<b>Deinococci</b>																							
71	<i>Deinococcus radiodurans</i> *		R	A				R	V	E		L		R	A		L		A	Q	A	L	
<b>Green-Sulfur</b>																							
72	<i>Chlorobium tepidum</i> *		R	I				L	M	E		T		H	Q		V		E	R	F	R	
% Identity		100	89					79	100		91		74		75		77		68			74	